

WHAT IS CLAIMED IS:

1. A flexible printed circuit pathway, comprising:
a first leg of flexible printed circuit oriented in a first plane, wherein signal traces within said first leg run parallel to said first leg of flexible printed circuit;

a second leg of flexible printed circuit, wherein signal traces within said second leg run parallel to said second leg of flexible printed circuit;

a first bend, coupling said first leg to said second leg and wherein signal traces within said first bend curve to match a curvature of said first bend;

a third leg of flexible printed circuit oriented in a second plane, wherein signal traces within said third leg run parallel to said third leg of flexible printed circuit;

a second bend, coupling said third leg to said second leg and wherein signal traces within said second bend curve to match a curvature of said second bend; and

a spiral object formed by said second leg, wherein said second plane twists about a center of said spiral object without placing a tearing stress on said flexible printed circuit.

2. The flexible printed circuit of Claim 1, wherein said first leg and/or third leg comprise at least one elbow, wherein said elbow divides said first leg and/or third leg into at least two sections oriented in different planes.

3. The flexible printed circuit of Claim 2, wherein a section of said third leg is oriented in a plane parallel to a section of said first leg, and wherein said third leg rotates within said plane parallel to a section of said first leg by twisting said spiral object.

4. The flexible printed circuit of Claim 1, further comprising electrical connectors coupling said signal traces on said first and third legs to external circuits.

5 5. The flexible printed circuit of Claim 1, wherein said signal traces carry a plurality of signals selected from the group consisting of: DC power, AC power, VGA, USB, analog audio, digital audio, analog video, digital video, LAN, WAN, and IEEE 1394.

10 6. The flexible printed circuit of Claim 1, wherein separation zones between said signal traces prevent cross-contamination of signals.

7. The flexible printed circuit of Claim 1, wherein said flexible printed circuit comprise:

15 a lower and upper poly layer that sandwich a ground trace layer and signal trace layer electrically separated by an insulating layer.

8. The flexible printed circuit of Claim 1, wherein said ground trace layer and signal trace layer comprise 1 oz, 3/4 oz, or 1/2 oz copper.

20 9. The flexible printed circuit of Claim 2, wherein said ground trace layer and signal trace layer thin locally to increase said flexible printed circuits flexibility.